

# Work Order ID 73958

Tuesday, September 20, 2011 10:18:09 AM



Page 1

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 9/20/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 10/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: *MF*

Date: 11-09-20

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
----------	--------------

D3492

C

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

*N/A*

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend I

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Folio 3, use bending aid DT9632  
2- cut fwd end of tube as per dwg

*[Handwritten signature]*

11-12-7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Cut Aft end using DT8185

2-Debur ends

3-Drill Aft Cap holes using DT8678 \*\*\* OPEN AFT CAP HOLE TO .187" \*\*\*

4-Locate DT 8973 from aft cap holes &amp; Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole, then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8900

7-Open wearplate holes to  $\varnothing 19/64"$  (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using .209" drill.

10-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

1- SPO 11-12-08

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Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140



Skidtubes

Skidtubes

0.00

Memo

0.00

Skidtubes

1-Weld fwd cap D2964 per dwg D3582 and QSI004

A/R AL ROD

Batch:

M117889

2-Grind flush

BE 11-12-08

150



QC

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

Quality Control

160



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

25 11-12-11

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

SD

SAD 11-12-11

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

190

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex

Batch:

Exp Date:

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD

Batch:

6-Grind welds flush

200

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

S12/01/03

11-12-09

66-11-12-23

SAD 12-02-02

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Reference:

Approvals: Process Plan: Date: Tooling: Date:

QC: Date: SPC (Y/N): Date:

Run Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/12/01/03

215

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Touch-up alodine as per QSI

1X4 M-L 12/01/03

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME  
OVEN TEMPERATURE:  
FINISH TIME:8-30  
320 OF  
9-00

1X4 M-L 12/01/04

M119480

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

230

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 BP 121-5.

250

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail C

A/R 241 Sika Flex Batch: 119508

Exp Date: 12-8

3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

\*\*\*\*\*Do not install bolts where indicated on Dwg(Note #6)\*\*\*\*\*

A/R 241 Sika Flex Batch: 119508

Exp Date: 12-8

4-assemble o-ring as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: 110418

5- Wing Walk as per Dwg D3582 and QSI 005 4.4

119094

1 BP 121-6.

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan  
Code

Accept Reject Reject Insp.  
Qty Qty Number Stamp

260

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

12-01-06 (1)

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D117-762-041

Location:

PPP Rev:

PPP 73957

12/01/09 (1)

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

12/1/10

ME 12-01-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Tuesday, September 20, 2011 10:18:05 AM

Page 1

Work Order ID: 73958

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube





Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC  
IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-11  Plug		Manufactured	No			250	Each	14.0000	2	2			
<div> <div>Location</div> <div>FP</div> <div>71863 ✓</div> </div> <div> <div>Loc Qty</div> <div>14</div> <div>14</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													
D3492-13  Plug		Manufactured	No			250	Each	23.0000	6	6			
<div> <div>Location</div> <div>FP</div> <div>71034 ✓</div> </div> <div> <div>Loc Qty</div> <div>20</div> <div>20</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													
<div> <div>Location</div> <div>FP-B</div> <div>46693</div> </div> <div> <div>Loc Qty</div> <div>3</div> <div>3</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													
D3492-9  Plug		Manufactured	No			250	Each	21.0000	2	2			
<div> <div>Location</div> <div>FP-A</div> <div>46694 ✓</div> </div> <div> <div>Loc Qty</div> <div>21</div> <div>21</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													
D2962-150  3.540 Outer Tube, Extrut		Manufactured	No				Each	57.0000		1			
<div> <div>Location</div> <div>HALL</div> <div>59934</div> </div> <div> <div>Loc Qty</div> <div>57</div> <div>57</div> </div> <div> <div>Loc Code</div> <div></div> <div></div> </div>													

PR 12-1-6

PR 12-1-6

PR 12-1-6

PR 11-12-7

①

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2964



Cap

Manufactured No

140

Each

5.0000

1

1



BE 11-12-08

Location

Loc Qty

Loc Code

LG002

5

64654

5

1

D2971



Cross Bolt Spacer

Manufactured No

190

Each

0.0000

1

1



8747AD x1 BE 11-12-23

D3584-1



Web

Manufactured No

190

Each

0.0000

1

1



IT 11-12-19

D2973



Cross Bolt Spacer

Manufactured No

190

Each

90.0000

2

2



BE 11-12-23

Location

Loc Qty

Loc Code

LG002

90

14636

90

2

D3662-3



Crossbolt Spacer

Manufactured No

190

Each

3.0000

1

1



BE 11-12-23

Location

Loc Qty

Loc Code

LG001

3

44456

3

1

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Shop Packet Print

Page 2

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Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3662-1 Manufactured No

190

Each

31.0000

3

3



Crossbolt Spacer



*211-12-23*

Location

Loc Qty

Loc Code

LG

31

71799

1

71857

30

Each

502.0000

36

ALS4-1032-130

Purchased

No



Insert



*BR 12-1-6*

Location

Loc Qty

Loc Code

ST281

370

118386

370

ST282

132

117717

46

118237

48

118312

38

Each

493.0000

2

ALS4-428-165

Purchased

No



Inserts



*BR 12-1-6*

Location

Loc Qty

Loc Code

FP

475

117769 ✓

475

FP-B

18

114172

18

Each

43.0000

1

1

D2965

Manufactured

No

250



Cap, 105 Skidtube



*BR 12-1-6*

Location

Loc Qty

Loc Code

FP006

43

71371 ✓

43

1

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Shop Packet Print

Page 3

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Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3508-3 Manufactured No 250 Each 8.0000 1 1



Wearplate



BR 12-1-6

Location Loc Qty Loc Code

FP021

1

38527

1

FP21

7

72169 ✓

7

D3508-9 Manufactured No 250 Each 10.0000 1 1



Wearplate



BR 12-1-6

Location Loc Qty Loc Code

FP21

10

72203 ✓

10

D3558-3 Manufactured No 250 Each 6.0000 1 1



Gasket



BR 12-1-6

Location Loc Qty Loc Code

FP014

6

75179

1

71651

5

72170

D3558-9 Manufactured No 250 Each 8.0000 1 1



Gasket



BR 12-1-6

Location Loc Qty Loc Code

FP014

8

71212 ✓

8

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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, September 20, 2011 10:18:06 AM

Page 5

Work Order ID: 73958

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3558-11 Manufactured No

250

Each

9.0000

1

1



Gasket



BR 12-1-6.

Location

Loc Qty

Loc Code

FP014

9

72202 ✓

9

1

D3558-13 Manufactured No

250

Each

13.0000

1

1



Gasket



BR 12-1-6.

Location

Loc Qty

Loc Code

FP014

13

59558 ✓

13

1

D3508-11 Manufactured No

250

Each

8.0000

1

1



Wearplate



BR 12-1-6.

Location

Loc Qty

Loc Code

FP016

8

72011 ✓

8

1

D3508-13 Manufactured No

250

Each

15.0000

1

1



Wearplate



BR 12-1-6.

Location

Loc Qty

Loc Code

FP016

15

71027

3

71794 ✓

12

1

AN960JDI0L \*NAS1149D0332J ✓ Purchased No

250

Each

0.0000

2

2



Washer



2 BR 12-1-6.

119042.

Tuesday, September 20, 2011 10:18:06 AM

Shop Packet Print

Page 5

WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 20, 2011 10:18:06 AM

Page 6

Work Order ID: 73958

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

250

Each

2,700.000

28

28



BOLT



OK 12-1-6.

Location

Loc Qty

Loc Code

ST350

119328.

2700

28.

117313

2

117688

5

117872

22

118112

16

118451

969

118628

186

118706

500

118838

1000

AN3C5A

Purchased

No

250

Each

1,062.000

2

2



Bolt



OK 12-1-6.

Location

Loc Qty

Loc Code

FP-A

119749.

7

2

115835

7

ST350

1055

116419

28

117343

356

117764

169

117872

2

118451

500

AN960JD416L

\* NAS1149D0416J ✓

Purchased

No

250

Each

15.0000

2

2



Washer



OK 12-1-6.

Location

Loc Qty

Loc Code

FP-B

118131

15

2.

110153

15

Tuesday, September 20, 2011 10:18:06 AM

Shop Packet Print

Page 6

## WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Tuesday, September 20, 2011 10:18:06 AM

Page 7

Work Order ID: 73958

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

AN960C10L ~~R~~ NAS1149C0332 ✓ Purchased No

250

Each

0.0000

28

28



washer

119736.



28. BR 12-1-6.

AN4-4A Purchased No

250

Each

48.0000

2

2



Bolt



BR 12-1-6

## Location

## Loc Qty

## Loc Code

FP-B

20

114615 ✓

20

2.

ST356

28

114615

28

NAS1611-012 Purchased No

250

Each

78.0000

6

6



O-RING



BR 12-1-6

## Location

## Loc Qty

## Loc Code

FP

68

118384 ✓

68

6.

FP-A

10

113845

10

NAS1611-015 Purchased No

250

Each

127.0000

2

2



O-RING



BR 12-1-6

## Location

## Loc Qty

## Loc Code

FP-A

127

115101 ✓

85

116081 ✓

42

2.

Tuesday, September 20, 2011 10:18:07 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 20, 2011 10:18:07 AM

Page 8

Work Order ID: 73958



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 9/20/2011

Required Date: 10/4/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1611-016

Purchased

No

250

Each

80.0000

2

2



HL 12-16

O-RING

Location

Loc Qty

Loc Code

FP-A

80

112492 ✓

54

113524

26

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

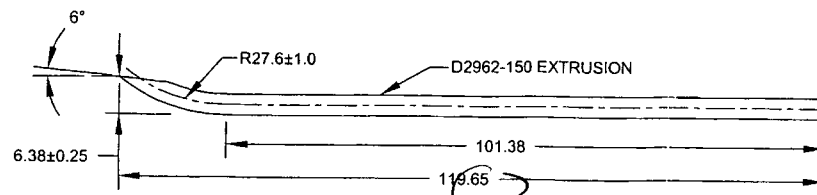


# PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

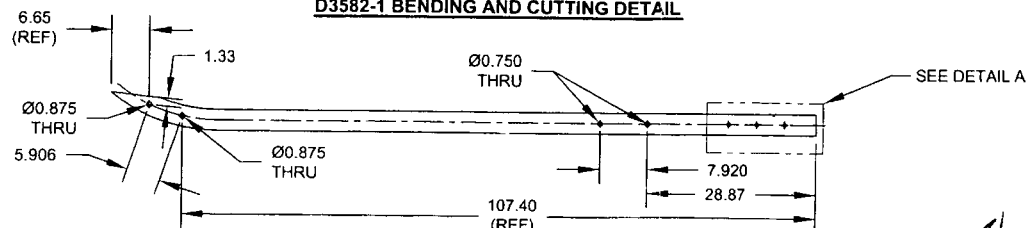
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-6A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

## GENERAL NOTES:

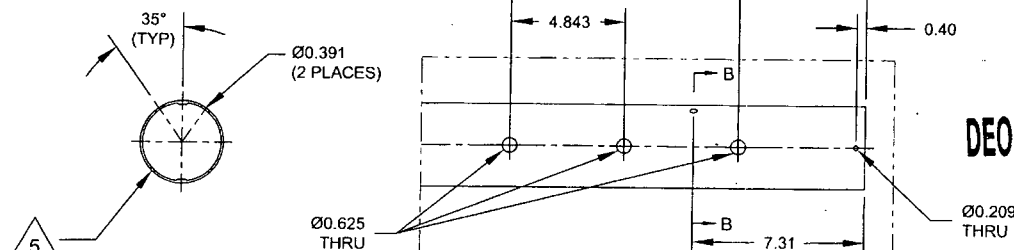
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL  $\varnothing 0.297$  HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
  - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB
  - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
  - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B  
SCALE 1:5

DETAIL A  
SCALE 1:5

DEO ATTACHED

RELEASED  
67-11-22

REV.	DESCRIPTION	PH	DATE
A	NEW ISSUE		07.06.08
DESIGN	DART AEROSPACE USA, INC		
DRAWN	PORT HADLOCK, WA		
CHECKED	DRAWING NO. D3582	REV. A	
MFG. APPR.		SHEET 1 OF 2	
APPROVED	TITLE BK 117 SKIDTUBE ASSEMBLY	SCALE	
DE APPR.		1:20	
DATE	07.06.08		

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D2964 CAP  
(GRIND FLUSH)

**DETAIL C**  
SCALE 1:10

D2971 SPACER

AFTER FINISH  
INSTALL  
D3492-049  
PLUG ASSEMBLY  
(2 PLACES)

**SECTION D-D**  
SCALE 3:10

AFTER FINISH  
INSTALL  
D3492-051  
PLUG ASSEMBLY  
(2 PLACES)

**SECTION E-E**  
SCALE 3:10

D3662-3 SPACER

**SECTION D-D NOTES**

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2971 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-049 PLUG ASSEMBLY (2 PLACES)

**SECTION E-E NOTES**

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-3 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-051 PLUG ASSEMBLY (2 PLACES)

DETAIL C  
D  
E  
D  
E  
D3558-9  
D3508-9  
NO BOLTS AT  
THESE LOCATIONS

**D3582-041 ASSEMBLY DETAIL**

BLACK ANTI-SKID

BLACK ANTI-SKID (TYP)

**D3582-041 BLACK ANTI-SKID DETAIL**

DEO ATTACHED

D2973 SPACER  
(2 PLACES)

**SECTION F-F**  
SCALE 3:10

**SECTION F-F NOTES**

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (2 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

D3584-1 WEB (REF)

D3662-1 SPACER  
(3 PLACES)

AFTER FINISH, INSTALL  
AELS-1032-130  
INSERT (36 PLACES)

AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(28 PLACES)

**SECTION G-G**  
SCALE 3:10

**SECTION G-G NOTES**

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-053 PLUG ASSEMBLY (6 PLACES)

AFTER FINISH, INSTALL  
ALS7-428-165 INSERT (1)  
AN4-4A BOLT (1)  
AN960JD416L WASHER (1)  
(2 PLACES)

AFTER FINISH  
INSTALL,  
D3492-053  
PLUG ASSEMBLY  
(6 PLACES)

D3584-1 WEB  
(REF)

AN3-5A BOLT (1)  
AN960JD10L WASHER (1)  
(2 PLACES)

**DETAIL H**  
SCALE 1:5

RELEASED

DESIGN	AM	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AM	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3582	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		BK 117 SKIDTUBE ASSEMBLY	1:20
DATE	07.06.08	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

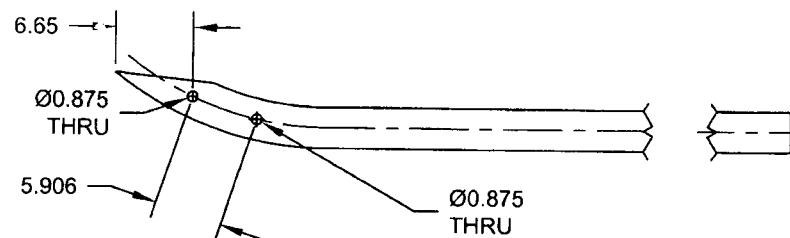
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>PH</i>	CHECKED <i>B</i>	MFG. APPR. <i>E</i>	APPROVED <i>MD</i>		DE APPR. <i>MA</i>		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 19/04/06		DATE 09.04.06		

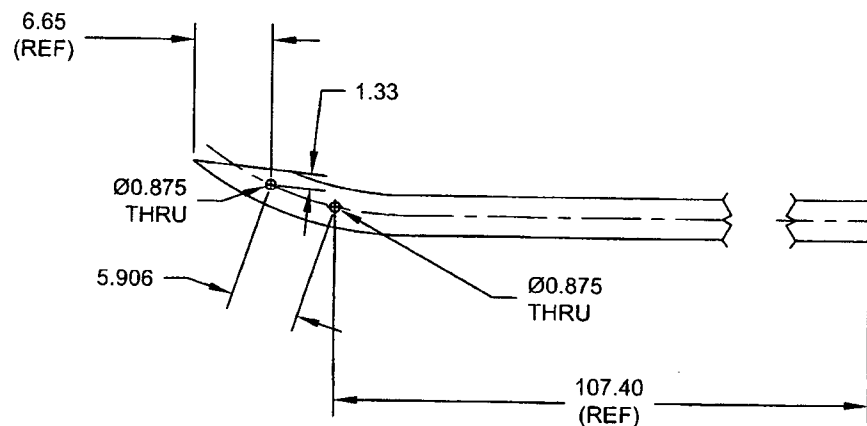
FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:  
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



# 73456

WAS:



RELEASED  
09/04/22 *MD*

## WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 263

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: B72593  
Part number: 5117 762 041  
Description: 117  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat Lucas Date of Test Coupon 11-08-17  
Welder Barclay Elliott Date of Test Coupon 11-08-17

The above named individual is qualified in accordance with AWS D17.1.2001 to weld